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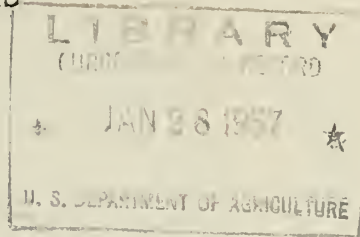
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UNITED STATES DEPARTMENT OF AGRICULTURE
✓ U. S. SOIL CONSERVATION SERVICE
✓ FEDERAL-STATE COOPERATIVE SNOW SURVEYS

504 Bozeman, Montana

3 SPECIAL SNOW REPORT

January 1, 1956
SNOW SURVEY DATA



Snow survey data collected for January 1, 1956, shows good water supply for this season. The exceptionally early winter over Montana has brought considerable snow to the mountain river basins during November and December. For this reason, comparison with other January records is difficult.

The January snow pack over the Beaverhead-Jefferson basin is better than twice that of last year; it is once and a half that of 1954, and once and a third that of average.

The January snow surveys on the Madison River basin this year show a very heavy snow pack. There is about four times as much water in the snow as last year; about twice as much as 1954, and about once and three-quarters as much as the average snow pack.

Comparisons on the Gallatin River basin indicate that this year's snow pack is approximately three times larger than last year; about two and a quarter times larger than 1954, and almost twice the average January first snow pack.

The January first snow pack along the Continental Divide from Toston to Fort Benton is considerably above average. The water content now is three times greater than last year; almost twice as great as 1954, and once and two-thirds greater than average.

We should not become too optimistic in forming judgment on these large percentages at this stage of the season. Three months of winter are still to come. Should January, February, and March bring normal snowfall, we should have an excellent water supply this spring and summer. An extended winter thaw could remove our apparent above average prospects of an abundant snow-melt water supply.

The Columbia River basin snow pack in western Montana is also above average for the first of January.

Snow survey measurements made in the Flathead basin at a few key stations, indicate that the present snow pack is two and a half times greater than last January first; about one and a third times greater than 1954, and one and one quarter times greater than the average pack for January first.

January snow measurements made in the Clark Fork basin show an above average snow pack. The water content this season is close to two and three-quarters times larger than last year; one and two-thirds larger than 1954, and almost once and a half greater than the January average.

Prospects for a good water supply are shown by these comparisons; however, with three months of winter to come before the stream flow forecasts are released, a prolonged winter thaw or a below average snowfall during January, February and March could change the present outlook.

MONTANA SNOW SURVEYS - JANUARY 1, 1956

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	Date of Survey	SNOW COVER MEASUREMENTS					Total Years of Record
				1956	Water Content (In.)	Past Record			
				Snow Depth (In.)		1955	1954	15-Year Average 1938-52	
<u>JEFFERSON RIVER</u>									
(Rock-Beaverhead)									
*Kilgore	11E12	6200	1/2	18	3.6	--	--	--	--
Camp Creek (Big Hole)	12E3	6800	12/30	18	4.5	2.5	2.7	4.0	19
Gibbons Pass	13D2	7100	1/3	63	19.5	5.5	10.8	12.0*	6
<u>MADISON RIVER</u>									
Hebgen	11E5	6550	1/3	30	7.1	1.8	5.3	5.6	21
W. Yellowstone	11E7	6700	1/3	34	8.9	2.1	3.8	4.1*	18
21-Mile	11E6	7150	1/3	50	15.0	3.0	6.6	7.7*	17
**Big Springs	11E9	6500	12/28	44	11.8	3.3	6.1	7.4	20
**Island Park	11E10	3600	12/29	36	9.0	2.4	4.5	5.9	20
**Valley View	11E8	6500	12/29	40	9.7	1.2	2.4	5.2*	19
Norris Basin	10E2	7500	1/3	31	7.7	--	3.3	--	2
<u>GALLATIN RIVER</u>									
Mystic Lake	10D2	6600				--	--	3.4*	14
New World	10D1	6700	1/2	23	5.6	--	--	4.7*	5
21-Mile	11E6	7150	1/3	50	15.0	3.0	6.6	7.7*	17
<u>MISSOURI RIVER MAIN STEM</u>									
Chessman Res.	12C5	6200	1/5	14	3.6	0.9	1.9	2.1	20
Pipestone Pass	12D1	7200	12/29	21	5.0	--	--	--	--
Tenmile, Lower	12C2	6250	1/3	23	5.4	1.5	3.0	2.8	20
Tenmile, Middle	12C3	6800	1/4	33	8.3	2.7	4.3	5.0	21
Tenmile, Upper	12C4	8000	1/3	37	9.8	3.7	5.2	6.5	21
<u>LOWER YELLOWSTONE</u>									
East Entrance	10E6	7000	12/31	26	6.2	--	3.3	--	3
Sylvan Pass (Marias River)	10E5	7100	12/31	23	10.3	--	4.0	--	2
Marias Pass	13A5	5250	1/3	41	8.4	4.2	10.8	7.8	21
<u>UPPER YELLOWSTONE</u>									
Canyon	10E3	7750	1/2	49	13.5	3.8	4.8	7.1*	10
Cooke City	10D7	7400	12/30	21	5.9	3.2	3.4	4.5*	9
Lake Camp	10E4	7850	12/31	40	10.2	1.8	3.2	5.0*	7
**Lewis Lake Divide	10E9	7000	12/30	105	35.8	9.7	6.3	18.5	36
**Astor Creek	10E8	7700	12/30	85	27.3	6.4	9.3	--	4

*Average is for less than 15 years in the 1938-52 period
 **Adjacent Basin

MONTANA SNOW SURVEYS - JANUARY 1, 1956

				SNOW COVER MEASUREMENTS					
				1956	Past Record				Total
				Snow	Water	Water Content			Years
				Depth	Content	15-Year			of
				(In.)	(In.)	1955	1954	Average	Record
COLUMBIA BASIN								1938-52	
DRAINAGE BASIN			Date						
AND			of						
SNOW COURSE	No.	Elev.	Survey						

FLATHEAD RIVER

Basin Creek									
Coyote Hill	13B10	4200	1/3	24	7.0	2.8	5.2		4
Desert Mountain	13A2	5600	1/3	38	8.7	2.9	5.7	7.6*	6
Holbrook	13B13	4530				--	2.5	--	3
Marias Pass	13A5	5250	1/3	41	8.4	4.2	10.8	7.8	21
Quintonkon	13A13	3800							
Spotted Bear Mt.	13B2	7000	1/5	34	7.9	--	--	--	0
Trout Lake	13A12	3600	1/5	32	6.6	--	--	--	1
Twin Creeks	13B11	3580	1/5	25	4.8	--	--	--	0

UPPER CLARK FORK

Chessman Res.	12C5	6200	1/5	14	3.6	0.9	1.7	2.1	20
Coyote Hill	13B10	4200	1/3	24	7.0	2.8	5.2	5.8*	4
**Fish Lake, Idaho	21B4	5000	1/5	87	27.1	12.7	--	--	2
**Lookout	15B2	5250	1/3	87	27.0	10.9	18.8	21.1*	6
Lubrecht Forest #6	13C8	5400	1/3	16	3.7	0.8	0.9	--	5
Pipestone Pass	12D1	7200	12/29	21	5.0	--	--	--	1
Storm Lake #2	13C7	7780	12/29	41	10.6	--	--	--	0
Tenmile, Lower	12C2	6250	1/3	23	5.4	1.5	3.0	2.8	20
Tenmile, Middle	12C3	6800	1/4	33	8.3	2.7	4.3	5.3	21
Tenmile, Upper	12C4	8000	1/3	27	9.8	3.7	5.2	6.5	21

BITTERROOT

Gibbons Pass	13D2	7100	1/3	63	19.5	5.5	10.8	12.0*	6
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*Average is for less than 15 years in the 1938-52 period

**Adjacent Basin



STATUS OF RESERVOIR STORAGE JANUARY 1, 1956

BASIN & STREAM	RESERVOIR	USEABLE CAPACITY (M.A.F.)	1956	THOUSAND ACRE FEET IN STORAGE ABOUT JANUARY FIRST 15-Yr. Avg.		
				1955	1954	1938-52

MISSOURI RIVER BASIN

Beaverhead	Lima	84.00	14.47	13.22	19.66	36.6*
Ruby River	Ruby	38.85				
Madison River	Hebgen Lake	345.00	192.90	167.5	149.00	241.65
Madison River	Ennis Lake	41.00	33.76	38.16	39.30	34.12
Hyalite Creek	Middle Creek		2.50	4.33	2.64	--
Missouri River	Canyon Ferry	401.70	1715.0	1311.0	862.3	--
Missouri River	Hauser & Helena	62.50	61.94	55.09	49.28	46.1*
Missouri River	Lake Helena	10.45	10.24	7.90	6.05	6.6*
Missouri River	Holter Lake	81.92	65.76	62.19	76.28	58.4
N.Fk Sun River	Gibson	105.00	62.41	63.95	71.60	55.1
N.Fk Sun River	Willow Creek	32.30	26.68	24.10	25.46	12.5
N.Fk Sun River	Pishkun	32.00	16.48	19.55	20.72	15.6
Birch Creek	Swift	30.00	19.06	24.48	20.23	18.2
Dupuyer & Birch	Lake Francis	112.00	92.36	95.31	92.16	72.5
Marias River	Tiber	1316.0	12640.0	New Reservoir		
Judith River	Ackley Lake	5.82	4.08	4.58	2.35	4.3*
Missouri River	Ft. Peck	19000.00	11980.0	9314.0	12010.0	9570.0*
Milk River	Fresno	127.20	63.81	77.22	74.85	46.9*
Milk River	Nelson	66.80	32.19	50.64	39.91	29.6
W. Rosebud Cr.	Mystic Lake	20.80	15.08	7.89	11.67	11.1
Red Lodge Creek	Cooney	27.50	8.84		15.28	8.2*
Tongue River	Tongue River	73.90	8.98	6.95	6.03	8.2*
Swiftcurrent Cr.	Sherburne Lake	66.10	17.18	16.80	16.20	17.3

MISSOURI RIVER BASIN - WYOMING

Shoshone River	Buffalo Bill	440.00	146.6	145.8	156.7	270.8
Wind River	Boysen	408.60	144.9	339.6	337.7	--
Wind River	Pilot Butte	31.6	8.5	9.2	8.9	12.9
Bull Creek	Bull Lake	152.00	79.8	66.3	84.9	63.6*
Belle Fourche	Key Hole	190.00	18.1	8.6	8.7	--

MISSOURI RIVER BASIN - NORTH DAKOTA

Heart River	Heart Butte	54.80	50.8	51.8	48.7	--
Heart River	Dickerson	4.3	3.0	2.5	4.3	--
Missouri River	Garrison Lake		138.0	239.0	New Reservoir	

MISSOURI RIVER BASIN - SOUTH DAKOTA

Belle Fourche	Belle Fourche	185.00	60.9	51.5	109.1	--
Cheyenne River	Angostura	160.00	79.6	30.0	31.0	--
Cheyenne River	Deerfield	15.1	9.3	10.2	15.4	--
Grand River	Shadehill	84.00	71.5	76.1	82.3	--
Missouri River	Ft. Randall		1654.7	1620.8	New Reservoir	

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STATUS OF RESERVOIR STORAGE JANUARY 1, 1956

BASIN & STREAM	RESERVOIR	USEABLE CAPACITY (M.A.F.)	THOUSAND ACRE FEET IN STORAGE ABOUT JANUARY FIRST 15-Yr.Avg.			
			1956	1955	1954	1938-52

COLUMBIA RIVER BASIN

Flint Creek	Georgetown Lk	31.00	25.90	24.4	22.8	21.8*
S.Fk.Flathead	Hungry Horse	3500.00	3331.00	2701.0	2326.0	--
Flathead River	Flathead Lake	1791.00	1037.0	1109.0	877.0	951.2*
Flathead River ^{6/}	Camas Res.	42.80	33.2	38.1	19.6	17.2*
Flathead River ^{7/}	Mission Valley	98.60	26.8	54.6	17.0	32.6*
Jocko Creek	Lower Jocko Lk	7.6	--	0	0	0

^{6/} Camas Reservoirs are shown as a sum of (4) small reservoirs on the west side of Flathead Lake located on Dry Creek and Little Bitterroot River.

^{7/} Mission Valley Reservoirs are shown as a sum of (8) small reservoirs located south and east of Flathead Lake. Both Camas and Mission Valley Reservoirs are operated by the Indian Irrigation Service.

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